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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/386,993	08/31/1999	HIROSHI OGAWA	10746/11	2012

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EXAMINER

CHOOBIN, BARRY

ART UNIT PAPER NUMBER

2625

DATE MAILED: 01/27/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/386,993	OGAWA ET AL.	
	Examiner	Art Unit	
	Barry Choobin	2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 November 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-72 is/are pending in the application.
- 4a) Of the above claim(s) 1-24 and 61-72 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 25,30,34,39,43,48,52 and 57 is/are rejected.
- 7) ☒ Claim(s) 26-29,31-33,35-38,40-42,44-47,49-51,53-56 and 58-60 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
 If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>2,3,9</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Claims 1 - 24 and 61 – 72 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in Paper No. 8.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

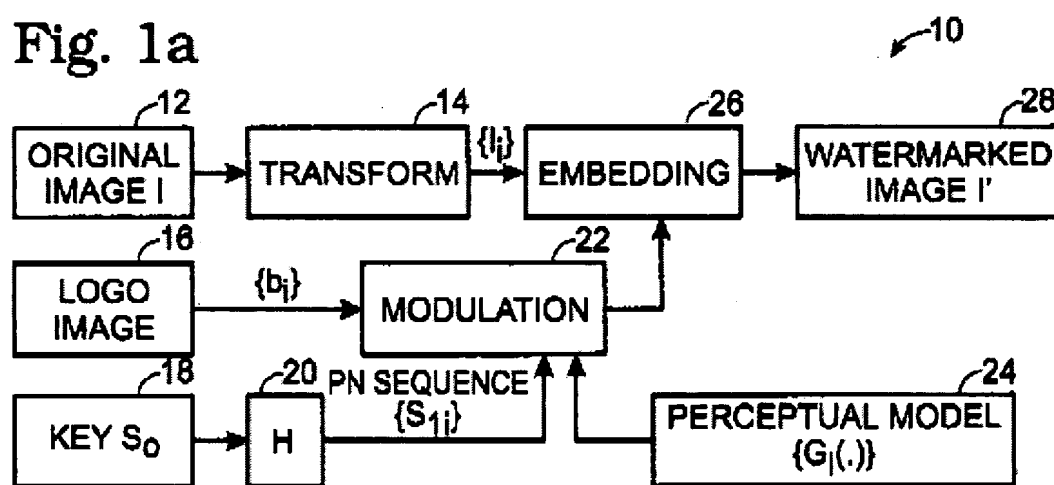
The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Art Unit: 2625

3. Claims 25, 30, 34, 39, 43, 48, 52 and 57 are rejected under 35 U.S.C. 102(e) as being anticipated by Zeng (U.S. Patent 6,373,974).

4. As to claims 25, 34, 43, 52 and 57, Zeng discloses a method for reading digital watermark embedded in digital data contents, said method comprising the steps of; receiving said digital data contents (refer for example to Fig1A "original image");

Fig. 1a



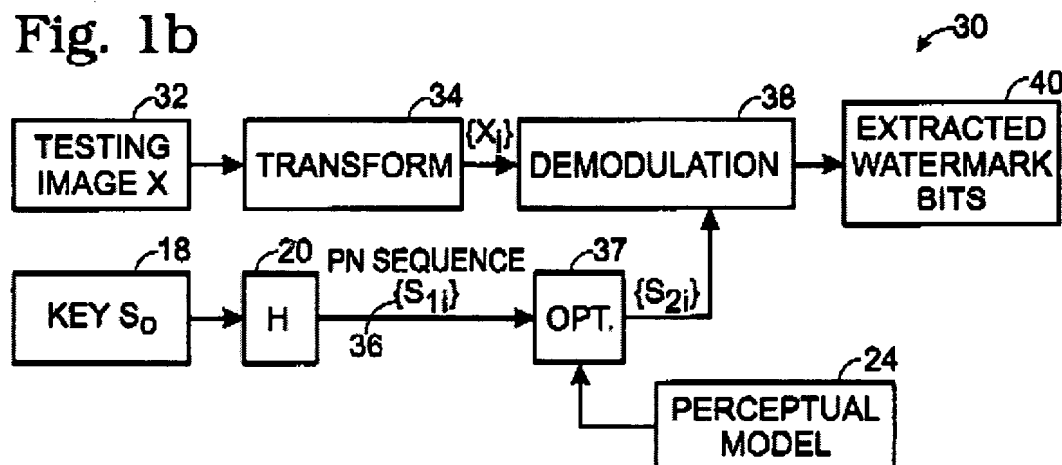
Reading a bit sequence from said digital data contents (refer for example to column 2, lines 64 – 67 wherein the method may also include examining segments of varying sizes in the image at the decoder for detecting each bit of the embedded signature, and allows a user of the method of the invention to select trade-offs between resolution and detection performance, and to select an overall level of performance.); calculating a probability of reading a bit “1” or a bit “0” in said bit sequence by using a test method on the basis of binary distribution (refer for example to column 3, lines 41 – 55 wherein the method of the invention provides an opportunity to exploit the human visual system's (HVS) superior ability to recognize a correlated pattern. In

Art Unit: 2625

this invention, a watermark decoder is allowed to directly extract a meaningful binary watermark image from the test image to prove image ownership. The human visual system's superior recognition ability is exploited to provide persuasive evidence of copyright ownership to a jury. The method is robust and will withstand common forms of signal processing. As used herein, "robust" means that there is a possibility of correct detection of each bit following signal processing, therefore, a more robust embedding/detection scheme has a higher probability that each bit will be correctly detected following signal processing.);

determining the presence or absence of digital watermark data according to said probability (refer for example to column 3, lines 53 – 55 wherein a more robust embedding/detection scheme has a higher probability that each bit will be correctly detected following signal processing. And Fig.1b);

Fig. 1b



reconstituting and generating said digital watermark data from said bit sequence (refer for example to column 4, line 65 through column 5, line 4 wherein the logo image 16 is modulated, step 22, with $S_{sub.1i}$, and, with perceptual model 24, which controls the magnitude of $G_{sub.i}$ ($I_{sub.i}$), is inserted, step 26, into $I_{sub.i}$, forming a watermarked image I'. The meaningful signature is, in the preferred embodiment, a 64.times.64 bit block, which, when projected on and inserted into a 512.times.512 image block provides one bit in every 8.times.8 block of the original image.).

As to claim 30, 39, 48 and 57, Zeng discloses modulation by pseudo-random sequence and reconstituting digital watermark data from said modulated bit sequence (refer for example to column 7, lines 5 – 21 wherein

Extraction of Multiresolution Binary Watermark Images

(23) The scheme presented above essentially extracts one bit information from the entire test image X, i.e., whether the claimed signature 18 ($S_{sub.0}$) is embedded in the test image or not. One may embed/extract more bits by segmenting the whole image into smaller segments, that may or may not overlap, and then embed/extract one bit for each segment. A segment may be defined as a collection of data located in various parts of the image. Once the pseudo random sequence $S_{sub.1}$ is generated and divided into smaller segments, each of which corresponds to one segment of the original feature set [$I_{sub.i}$], each

Art Unit: 2625

segment of S.sub.1 may be modulated by either +1 or -1, which is then embedded into the corresponding segment of [l.sub.i]. Detection of this one bit information for a particular segment is accomplished via the hypothesis testing).

Allowable Subject Matter

5. Claims 26 – 29, 31 – 33, 35 – 38, 40 – 42, 44 – 47, 49 – 51, 53 – 56 and 58 - 60 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

7. U.S. Patent 6,480,825 to Sharma et al is cited for System and Method for detecting a recording voice.

8. U.S. Patent 6,185,312 to Nakamura et al is cited for Method for embedding and reading watermark information in digital form, and apparatus thereof.

9. U.S. Patent 6,246,777 to Agarwal et al is cited for compression tolerant watermarking scheme for image authentication.

Art Unit: 2625

10. U.S. Patent 6,345,100 to Levine is cited for Robust watermark method and apparatus for digital signals.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Barry Choobin whose telephone number is 703-306-5787. The examiner can normally be reached on M-F 7:30 AM to 18:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh Mehta can be reached on 703-308-5246. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

Barry choobin

January 21, 2003



Jayanti K. Patel
Primary Examiner